

MINUTES OF AGC-DOT JOINT BRIDGE SUBCOMMITTEE MEETING

(Approved: 8/19/15)

The AGC-DOT Joint Bridge Subcommittee met on April 8th, 2015. Those in attendance were:

Tom Koch	State Structures Engineer (Co-Chairman)
Berry Jenkins	Carolinas AGC - Highway Division Director (Co-Chairman)
Kevin Bowen	State Bridge Construction Engineer
Jessica Kuse	State Value Management Engineer
Brian Hanks	Assistant State Structures Engineer
Jay Boyd	Balfour Beatty Infrastructure
Lee Bradley	Blythe Construction, Inc.
Chris Britton	Buckeye Bridge, LLC
Adam Holcomb	Dane Construction, Inc.
Erick Frazier	S. T. Wooten Corporation
Randall Gattis	Sanford Contractors, Inc.
Larry Cagle	Thompson-Arthur Div., APAC-Atlantic, Inc.
Damien Hollifield	Young and McQueen Grading Co.
Pike Riegert	Zachry Construction Corporation
Scott Hidden	Geotechnical – Support Services Supervisor
Darren Scott	Materials and Tests – Structural Members Engineer
Bill Goodwin	Structures Management Staff Engineer
Dan Muller	Structures Management Project Engineer
Paul Lambert	Structures Management Project Engineer
Todd Garrison	Structures Management Eng. Supervisor (Subcommittee Secretary)

1. Approval of Minutes

The minutes of the October 8th, 2014 meeting were approved.

2. Resource Conservation and Environmentally Sustainable Practices

Mrs. Kuse discussed new procedures for Contractors to voluntarily report any construction waste diverted from landfills and materials recycled or reused during construction. The Value Management Unit has developed a form that Contractors may fill out annually to report resource conservation efforts. Mrs. Kuse encouraged Contractors to keep track of their conservation efforts during each project to assist in the annual report. Once this form is submitted to Value Management, the information will be compiled in a database to report the statewide efforts in resource conservation. Mrs. Kuse stated that this new process will hopefully begin by July 1st. Mr. Jenkins mentioned that Contractors should be reminded of this process at preconstruction meetings and Mrs. Kuse stated that Value Management is considering this.

Mrs. Kuse also encouraged Contractors to submit Value Engineering proposals and plans to present ideas to decrease project costs. As proposals are approved, Contractors should submit the final plans including the VE revisions to Value Management.

3. SIP Form Clips

Mr. Lambert informed the subcommittee that some prestressed concrete girder producers are receiving submittals requiring 10-gauge embedded clips. However, the NCDOT 2012 Standard Specifications state that the clips shall be 12-gauge steel. Mr. Lambert stated that

10-gauge SIP forms and 10-gauge clips are not uncommon for wider prestress girder spacings, but the girder producers may not be aware that 10-gauge clips will be required on a particular project at the time the girders are fabricated with standard 12-gauge embedded clips. Mr. Lambert also noted that Pennsylvania requires the use of 10-gauge clips regardless of girder spacing and that the cost difference between 12-gauge and 10-gauge is minimal.

The subcommittee agreed to start using 10-gauge steel clips embedded in all prestressed concrete girders. Structures Management will develop a Standard Special Provision for this revision before it is incorporated into the Standard Specifications.

4. Changes to Fly Ash Specification

Mr. Bowen discussed the reevaluation of fly ash usage. The Construction Unit, along with the Materials and Tests Unit, was investigating the inclusion of fly ash in all bridge decks throughout North Carolina, but decided against it based on the current fly ash supply. The fly ash requirement and plan note for bridge decks in Divisions 5, 7, and 9 through 14 will not change. Mr. Bowen stated that the minimum substitution rate (20% by weight of required cement content with 1.2 pounds of Class F fly ash per pound of cement replaced) specified in Article 1024-1 of the Standard Specifications for any Portland cement concrete will not change. However, the specifications will be revised to allow a substitution rate of up to 30%.

Structures Management will review the plan note regarding fly ash in Divisions 5, 7, and 9 through 14 bridge decks and discuss if the new substitution rate range should be referenced.

5. Coal Combustion Products in Embankments

Mr. Bowen provided the subcommittee with an update on a provision which allows the use of coal combustion products (CCP) in soil embankments. Use of this type of material instead of borrow material will require a 90 day notice for approval and should also be reported to Value Management. When asked about placement of this material within or on top of embankments, Mr. Bowen explained the cross-sectional detail included with this new provision, which shows a 4' soil encapsulation below, above, and on the side slopes of any CCP placed in a roadway embankment, as well as required buffer distances from dwellings or wells, and wetlands or surface waters. The provision addresses a maximum lift thickness of 10" and a density requirement of 95%. Mr. Bradley stated that if the coal-combusted material is properly blended into the embankment, the fill material can be improved. Mr. Jenkins mentioned that the dusting that results from use of this material should be considered if the site is near a residential area.

6. Grout Specification Changes

Mr. Hidden updated the subcommittee on revisions to grout specifications. Currently, the NCDOT Approved Products List categorizes grout as "Grouts – Other" and "Non-Shrink Grout". As a result of the specification revision, grouts will be classified into different types (Type 1 through Type 5) on the Approved Products List. The more commonly used grouts will be Type 3 and Type 2. Type 3 grout will be grout for structures used in above-ground applications. Type 2 grout will be non-shrink grout used in below-ground applications. In the future, Section 1003 of the Standard Specifications will be replaced with the contents of the new grout specification.

Mr. Hidden explained that producers of pre-mixed grout were notified of this revision and were asked to resubmit their products through Value Management as particular grout types. Materials and Tests will review resubmitted products to ensure that the requirements of certain grout types are met. Mr. Bowen stated that there will probably be a grace period during the reclassification process in which products currently on the APL may still be used.

7. Integral End Bent Reinforcing Steel Connection to Approach Slab

Mr. Gattis spoke to the subcommittee about common cracking that is noticed in the concrete directly over the steel reinforcing bars that tie integral end bent diaphragms with the approach slabs. Mr. Gattis proposed the possibility of detailing a vertical dowel bar between the diaphragm and approach slab, located within the 10 inch blockout in the diaphragm on which the approach slab is constructed, but this could potentially create problems if the approach slab settles.

Structures Management will discuss and investigate alternatives for the connection between integral end bent diaphragms and approach slabs.

8. Requirement for Skidmore on Concrete Girder Diaphragms

Mr. Nickel was unable to attend the meeting. Therefore, discussion of this item was postponed.

9. Transverse Construction Joint Detail for Decks

On behalf of the subcommittee Contractors, Mr. Holcomb proposed the elimination of the shear key in the detail for transverse construction joints in bridge decks. Mr. Koch solicited the Contractors for alternate details, other than simply a vertical cold joint, that would provide a sufficient connection to transfer shear in the concrete.

Structures Management will continue to discuss this issue and investigate other options.

10. Update on Northern Long-Eared Bats

Mr. Bowen provided an update on the U.S. Fish and Wildlife Service requirements related to Northern Long-Eared Bats. These bats are currently listed as a threatened species instead of endangered. Effective May 4th, interim 4(d) rules of the Endangered Species Act will provide flexibility to landowners and government agencies conducting activities in NLEB habitats. The U.S. Fish and Wildlife Service are also allowing for a comment period to accept further input through July 1st, with final 4(d) rules expected by the end of the year.

As noted in the 8/20/14 subcommittee meeting minutes, Mr. Bowen again stated that projects in Divisions 1-8 will not be adversely affected since the Department will be under a programmatic agreement with USFWS.

For Divisions 9-14, under the 4(d) rules, there are certain allowances for activities to continue without a tree clearing moratorium as long as established conservation measures are adhered to.

Conservation Measures:

- No clearing within 0.25 miles of known, occupied hibernacula (winter hibernation site).
- No cutting of known, occupied roost trees during pup season (June 1-July 31).

- No clear cutting within 0.25 miles of known, occupied roost trees during pup season (June 1-July 31). Clear cutting is defined as cutting of most or essentially all trees from an area.

Allowed Activities that apply to NCDOT provided the above conservation measures are followed:

- 100' clearing within an existing clear transportation corridor.
- Inspection of all bridges by a qualified individual to determine that no NLEB are present prior to removal of the structure. Trained staff is available to conduct inspections.
- Clearing quantities of 1 acre or less, which includes borrow/waste sites.

Projects that exceed an acre of clearing must go through consultation with USFWS before clearing or bridge removal.

Mr. Muller asked if bridge rehabilitation work such as painting and deck washing would be impacted; Mr. Bowen restated that each site will require evaluation to determine NLEB presence in Divisions 9-14.

Mr. Bowen will continue to update the subcommittee on this topic.

11. Next Meeting

The next meeting is scheduled for June 10th, 2015 in the Structures Management Conference Room C.

Post Meeting Notes

Due to a limited agenda, the June 10th, 2015 meeting was cancelled.

Due to schedule conflicts, the August 12th, 2015 meeting was rescheduled for August 19th, 2015.